

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claim 1(Original). A method for proof of the manufacturing technology used to fabricate electronic assemblies, said electronic assemblies containing a plurality of electronic modules mounted to a circuit board, said circuit board including a plurality of electrically conductive bonding pads for connection to a respective corresponding plurality of electrically conductive terminals of an electronic module, said plurality of electrically conductive bonding pads including at least one group of electrically conductive bonding pads, said group of bonding pads comprising any one of a row, or zone, or array, or sub-array of bonding pads; said electronic modules including electric terminals secured to said bonding pads on said circuit board, comprising the steps of:

fabricating a surrogate circuit board using said manufacturing technology, said surrogate circuit board replicating said circuit board at least in the principal thermal and mechanical features thereof, including size, shape, and bonding pads, wherein said surrogate circuit board includes a plurality of electrically conductive bonding pads for connection to a respective corresponding plurality of electrically conductive terminals of an electronic module, said plurality of electrically conductive bonding pads of said surrogate circuit board including at least one group of electrically conductive bonding pads;

said surrogate circuit board further including wiring for electrically individually connecting together each bonding pad in said group of bonding pads, excepting a first and second bonding pad in said group of bonding pads, with only one other bonding pad in said group of bonding pads, excepting said first and second bonding pads, to form a plurality of bonding pad pairs, exclusive of said first and second bonding pads;

said surrogate circuit board further including a first voltage bus, a ground bus, electrical bonding pads for securing a continuity monitoring device, wiring for connecting said first voltage bus to said first bonding pad, and wiring for connecting an input of said continuity monitoring device to said second bonding pad;

fabricating a surrogate electronic module, said surrogate electronic module replicating said electronic module in at least the principal thermal and mechanical features thereof, including size, geometry and plurality of electrically conductive terminals, said plurality of electrically conductive terminals including a group of electrical terminals, said surrogate electronic module further including internal wiring connecting each one of said terminals in said group of electrical terminals to only one other terminal in said group of electrical terminals to form a plurality of pairs of terminals, said internal wiring being such as to define with said plurality of pairs of bonding pads and said first and second bonding pads of said surrogate circuit board a DC series circuit when said terminals are secured to associated bonding pads in said group of bonding pads with said first and second bonding pads defining first and second ends to said DC series circuit;

securing said surrogate electronic module to said row or zone or sub-array of bonding pads on said surrogate circuit board using said manufacturing technology to define said DC series circuit between said first and second bonding pads;

securing a continuity monitoring device to said surrogate circuit board, wherein said input of said continuity monitoring device is electrically connected to said second end of said DC series circuit, said continuity monitoring device including an indicator lamp;

applying a DC voltage to said first voltage bus, wherein said DC voltage is applied through said DC series circuit to said input of said continuity monitoring device so long as said DC series circuit is uninterrupted;

said continuity monitoring device being responsive to the application of a said DC voltage for preventing operation of said indicator lamp, and responsive to withdrawal of said DC voltage for operating said indicator lamp to place said lamp in an operated condition and maintaining said display lamp operated thereafter to provide a persistent indication irrespective of the reapplication of said DC voltage;

subjecting said surrogate circuit board to stresses, said stresses including any one or more of bowing, twisting, temperature variation, sinusoidal or random vibration, and shock over a range of intensities and durations; and

inspecting said indicator lamp to determine if an interruption occurred in said DC series circuit.

Claim 2 (Original). The method of detecting transient failure of at least one connection in a set of electrical connections that secure an electronic module to a circuit board comprising the steps of:

creating a series electrical circuit through said set of electrical connections and corresponding electric terminals of said electronic module;

continuously monitoring said series electrical circuit for an interruption and producing a persistent indication in the event an interruption occurs in said series electrical circuit; and

subjecting said circuit board and the module secured to said circuit board to a variation in environmental condition to determine if such variation produces an interruption in said series circuit, and, if so, providing a persistent indication thereof.

Claim 3 (Original). The method of detecting transient failure as defined in claim 2, wherein said variation in environmental condition comprises shaking said circuit board in varying intensities.

Claim 4 (Original). The method of detecting transient failure as defined in claim 2, wherein said variation in environmental condition comprises exposing said circuit board to various ambient temperatures.

Claims 5-15 (CANCELED).